

I CLAIM:

1. A coupling device for a foldable frame that includes a pair of elongate rod members, each of which has an engaging end portion, and a pivot portion connected to the engaging end portion, said coupling device being adapted to interconnect pivotally the pivot portions of the rod members such that the rod members are operable so as to move from an extended position, where the rod members are aligned with each other in a first direction, to a folded position, where the rod members are generally parallel to each other and extend in a second direction generally transverse to the first direction, said coupling device comprising:

a coupling seat unit configured with an accommodating space and having a first open side and a second side opposite to each other in the second direction, and third and fourth open sides opposite to each other in the first direction and adapted to be connected pivotally and respectively to the pivot portions of the rod members such that the engaging end portion of each of the rod members extends into said accommodating space in the first direction via a respective one of said third and fourth open sides when the rod members are in the extended position and such that the engaging end portion of each of the rod members is disposed at the respective one of said third and fourth open sides;

a spring-loaded latch unit mounted movably in said

accommodating space of said coupling seat unit, said latch unit being operable from an engaging position, where said latch unit is adapted to engage the engaging end portions of the rod members so as to retain the rod members in the extended position, to a releasing position, where said latch unit is unable to engage the engaging end portions of the rod members so as to permit movement of the rod members from the extended position to the folded position; and

an actuating member having a connecting portion that extends into said accommodating space of said coupling seat unit via said first open side and that is mounted movably on said coupling seat unit so as to be movable relative to said coupling seat unit in the second direction, and an actuating portion connected to said connecting portion, disposed at said first open side of said coupling seat unit, and operable externally of said accommodating space for moving said actuating portion in said accommodating space along the second direction such that said actuating portion drives said latch unit to move from the engaging position to the releasing position.

2. The coupling device as claimed in Claim 1, wherein said coupling seat unit includes:

a hollow female seat body having said third and fourth open sides, said second side, and a fifth open side opposite to said second side in the second direction;

and

a hollow male seat body having said first open side and a sixth open side opposite to said first open side in the second direction, said male seat body being
5 sleeved on said female seat body such that said male seat body cooperates with said female seat body so as to confine said accommodating space.

3. The coupling device as claimed in Claim 2, wherein said male seat body is fixed to said female seat body
10 by a pair of rivets spaced apart from each other in the second direction.

4. The coupling device as claimed in Claim 1, wherein said connecting portion of said actuating member is formed with a guiding groove extending in the second
15 direction, and said coupling seat unit is formed with at least a guiding projection that extends into said guiding groove to guide movement of said actuating member in the second direction.

5. The coupling device as claimed in Claim 1, wherein
20 said latch unit includes:

a pair of engaging blocks spaced apart from each other in the first direction (A), each of said engaging blocks being retained rotatably in said accommodating space and being rotatable relative to said coupling seat unit
25 about a respective pivot axis transverse to the first and second directions, each of said engaging blocks having an engaging portion adjacent to said second side

of said coupling seat unit, and an abutting portion opposite to said engaging portion in the second direction,

5 said engaging portions of said engaging blocks moving toward each other in the first direction, and said abutting portions of said engaging blocks moving away from each other in the first direction when said latch unit is moved from the engaging position to the releasing position,

10 said engaging portion of each of said engaging blocks being formed with an engaging groove adapted to engage the engaging end portion of a respective one of the rod members,

15 said abutting portion of each of said engaging blocks being formed with a first bevel face that abuts against said actuating portion of said actuating member when said latch unit is at the engaging position, and a second bevel face that abuts against said actuating portion of said actuating member when said actuating portion is moved into said accommodating space of said coupling seat unit via said first open side; and

20 a biasing piece interconnecting said engaging portions of said engaging blocks and providing a restoring force for restoring said latch unit from the releasing position back to the engaging position.

25 6. The coupling device as claimed in Claim 5, wherein said biasing piece is a coiled compression spring.

7. The coupling device as claimed in Claim 1, wherein said actuating portion of said actuating member has an undulated operating surface remote from said connecting portion in the second direction.

5 8. A coupling device for a foldable frame that includes a pair of elongate rod members, each of which has an engaging end portion, and a pivot portion connected to the engaging end portion, said coupling device being adapted to interconnect pivotally the pivot portions
10 of the rod members such that the rod members are operable so as to move from an extended position, where the rod members are aligned with each other in a first direction, to a folded position, where the rod members are generally parallel to each other and extend in a second direction
15 generally transverse to the first direction, said coupling device comprising:

a coupling seat unit configured with an accommodating space and adapted to be connected pivotally and respectively to the pivot portions of the rod members
20 such that the engaging end portion of each of the rod members extends into said accommodating space in the first direction when the rod members are in the extended position;

a spring-loaded latch unit mounted movably in said
25 accommodating space of said coupling seat unit, said latch unit being operable from an engaging position, where said latch unit is adapted to engage the engaging

end portions of the rod members so as to retain the rod members in the extended position, to a releasing position, where said latch unit is unable to engage the engaging end portions of the rod members so as to permit movement
5 of the rod members from the extended position to the folded position; and

an actuating member having a connecting portion that extends into said accommodating space of said coupling seat unit so as to be movable relative to said coupling
10 seat unit in the second direction, and an actuating portion connected to said connecting portion, disposed at said coupling seat unit, and operable externally of said accommodating space for moving said actuating portion in said accommodating space along the second
15 direction such that said actuating portion drives said latch unit to move from the engaging position to the releasing position.